



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,080	12/01/2003	Dragan Tomic	MSFT-2793/304866.01	4783
41505 7590 10/17/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER CHEN, TE Y	
			ART UNIT 2161	PAPER NUMBER
			MAIL DATE 10/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,080	TOMIC ET AL.	
	Examiner	Art Unit	
	Susan Y. Chen	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8, 10-12, 20-25 and 27-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8, 10-12, 20-25, 27-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/01/2007 has been entered.

This office action is in response to the amendment filed on May 29, 2007.

Claims 8, 10-12, 20-25 and 27-30 are pending for examination. Claims 8, 10-12, 20 and 25 have been amended.

Drawings

The drawings filed on Dec. 1, 2003 have been filed on record and accepted by the examiner.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Art Unit: 2161

As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Claims 8, 10-12, 20-25 and 27-30, are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As to claim 8, although this claim being amended in form "a database system" for storing data, however, the recitation of this claim merely has some intended usage without having any physical hardware that actually executes the intended functions. Even if applicant has amended the claim to include a processor, however, the recitation of the claim indicates "program code executable by said processor executable by said

Art Unit: 2161

processor for...”, which has merely some intended usages for the claimed database system, but not really being executed by the claimed system to produce a real world application results. In addition, this claim only stores XML instances when the claimed “XML” instant is validated by the claimed “XML schema namespaces identified by said URLs”, otherwise, the instant invention just hang-up without doing anything or bearing any useful real world results, as such, it directs to non-statutory subject matter.

As to claim 20, this amended claim merely recites descriptive steps, namely, the claim seems to producing a tangible result only when an XML instance is conformed to one of the dual XML schema namespace URLs, otherwise, the instant invention just hang-up there without bearing any useful real world results. In addition, the use of the words “may be stored” renders that the claimed method is merely for some intended usage but may not happen in the real world application, as such, it directs to non-statutory subject matter.

As to claim 25, the claim recites the same limitations as claim 8 in form of computer readable medium, thus, has the same issue as addressed in claim 8. In addition, the instant specification disclosed that the claimed “computer readable medium” includes “a carrier wave or other transport mechanism and includes any information delivery media...” since a carrier wave and other transport/delivery mechanism such as signals, acoustic, RF, infrared, etc. are known by the ordinary skilled person in the art as a non-storage medium, thus, the claimed features are deemed to be non-statutory subject matters.

Art Unit: 2161

As to claims 10-12, 21-24 and 27-30, these claims have the same defects as their base claims, hence, are rejected for the same reason.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8, 10-12, 20-25 and 27-30, are rejected under 35 U.S.C. 102(e) as being anticipated by Murthy et al. (U.S. Publication No. 7,096,224, hereinafter referred as Murthy).

Claim 8:

Murthy discloses a database system for storing data comprising Extensible Markup Language (XML) instances, said database system [e.g., Abstract], comprising:

Art Unit: 2161

a program code executable by said processor for generating a container for XML schema namespaces [e.g., col. 3 lines 51-62];

a program code executable by said processor for associating at least two XML schema namespace universal resource identifiers (URIs) with said container [e.g., col. 10, section: Mapping XML schemas to Object types – a Detailed Example starting at col. 10, line 45 at seq., the use of table “Default mapping of XML simple types to SQL” at col.(s), 11-12];

a program code executable by said processor for validating an XML instance according to XML schema namespaces identified by said URLs [e.g., col. 4, lines 13-14, & lines 52-col. 5, lines 52 and the Example at col. 17] ;

a program code executable by said processor for storing an XML instance in a database column [e.g., col. 3, lines 54-57, col. 9, lines 55-67];

a program code executable by said processor for typing said database column with said container [e.g., the program to create Schema-based XMLTYPE Tables and column technique at col. 9, line 37- col. 10, line 39].

Claim 10:

Except the limitations recited in claim 8, Murthy further discloses that a program code executable by said processor further comprising an import function which modifies said container so that it refers to at least one schema component in an XML schema namespace other than XML schema namespaces identified by said at least two XML

Art Unit: 2161

schema namespace URIs [e.g., the use of table “Default mapping of XML simple types to SQL” at col.(s), 11-12].

Claim 11:

Except the limitations recited in claim 8, Murthy further discloses a program code executable by said processor that comprises an include function which allows assembly of schema component for a single namespace from several schema documents [e.g. col. 4, lines 10 – 37, XML Schema Registration at col. 4, line 40 – col. 5, line 52].

Claim 12:

Except the limitations recited in claim 8, Murthy further discloses a program code executable by said processor that comprises an alter function which adds schema components to XML schema namespaces within said container [e.g., col. 4, lines 20-21].

As to claims 20-24, these claims recite the same features as claims 8, 10-12 with different wording, hence, are rejected for the same reason.

As to claims 25, 27-30, the claimed instructions and software means are deemed to be inherent by the functional steps as recited in claims 8-12 and 20-24, hence are rejected for the same reason.

Response to Arguments

Applicant's arguments filed on May 29, 2007 have been fully considered but they are not persuasive.

In reply to applicant's arguments against the 35 U.S.C. 101 rejections, the examiner points out that since the amendment as filed currently fails to overcome the rejections as discussed above for the reasons cited as following:

As to claim 8, although this claim being amended in form "a database system" for storing data, however, the recitation of this claim merely has some intended usage without having any physical hardware that actually executes the intended functions. Even if applicant has amended the claim to include a processor, however, the recitation of the claim indicates "program code executable by said processor executable by said processor for...", which has merely some intended usages for the claimed database system, but not really being executed by the claimed system to produce a real world application results. In addition, this claim only stores XML instances when the claimed "XML" instant is validated by the claimed "XML schema namespaces identified by said URLs", otherwise, the instant invention just hang-up without doing anything or bearing any useful real world results, as such, it directs to non-statutory subject matter.

As to claim 20, this amended claim merely recites descriptive steps, namely, the claim seems to producing a tangible result only when an XML instance is conformed to one of the dual XML schema namespace URLs, otherwise, the instant invention just hang-up there without bearing any useful real world results. In addition, the use of the words "may be stored" renders that the claimed method is merely for some intended

Art Unit: 2161

usage but may not happen in the real world application, as such, it directs to non-statutory subject matter.

As to claim 25, the claim recites the same limitations as claim 8 in form of computer readable medium, thus, has the same issue as addressed in claim 8. In addition, the instant specification disclosed that the claimed "computer readable medium" includes "a carrier wave or other transport mechanism and includes any information delivery media..." since a carrier wave and other transport/delivery mechanism such as signals, acoustic, RF, infrared, etc. are known by the ordinary skilled person in the art as a non-storage medium, thus, the claimed features are deemed to be non-statutory subject matters.

As to claims 10-12, 21-24 and 27-30, these claims have the same defects as their base claims, hence, are rejected for the same reason.

Thereby, the 35 U.S.C. 101 rejections are maintained.

The examiner disagrees with applicant's arguments that "Murthy does not disclose typing database columns with a container for XML schema namespaces, as required by each of the independent claims."

In reply to above arguments, the examiner directs applicant's attention to the following excerpts disclosed by Murthy:

Art Unit: 2161

"Tables and columns that are part of the "appropriate database representation" of an XML schema are referred to herein as "schema-based" tables and columns. According to one embodiment, Schema-based XMLType tables and columns can be created by referencing the schema URL (of a registered schema) and the name of the root element. A subset of the XPointer notation (shown below) can also be used in providing a single URL containing both the schema location and the element name."

```
CREATE TABLE po_tab OF xmltype
XMLSCHEMA "http://www.oracle.com/PO.xsd" ELEMENT
"PurchaseOrder"
```

An equivalent definition is

```
CREATE TABLE po_tab of xmltype
element "http://www.oracle.com/PO.xsd#PurchaseOrder";
```

By default, schema-based XMLType is stored in an underlying (hidden) object type column. The SQL object types can be created (optionally) during the schema registration process. The mapping from XML to SQL object types and attributes is itself stored within the XML schema document as extra annotations i.e. new attributes defined by XDB. Schema-based XMLType can also be stored in a single underlying LOB column.

```
CREATE TABLE po_tab OF xmltype
STORE AS CLOB ELEMENT
"http://www.oracle.com/PO.xsd#PurchaseOrder";
Creation of SQL Object Types
```

According to one embodiment, when an XML schema is registered, database server 104 creates the appropriate SQL object types that enable a structured storage of XML documents conforming to this schema. All SQL object types are created in the current user's schema (by default). For example, when PO.xsd is registered, the following SQL types are created.

```
create type Item_t as object
( part varchar2(1000),
price number );
create type Item_varray_t as varray(1000) of OBJ_T1;
create type PurchaseOrder_t as object
( purchasedate date, ponum number, company
varchar2(100), item Item_varray_t );
```

The names of the object types and attributes above may actually be system-generated. If the schema already contains the SQLName attribute filled in, this name is used as the object attribute's name. Else, the name is

Art Unit: 2161

derived from the XML name--unless it cannot be used because of length, or conflict reasons. If the SQLSchema attribute is filled in, Oracle will attempt to create the type in the specified schema. The current user must have any necessary privileges to perform this operation."

As set forth above, Murthy clearly disclosed the use of the command "CREATE TABLE" to create "XMLTYPE" tables for containing "XMLSCHEMA" typed objects created by the "create type" command, such that the created "XMLSCHEMA" typed objects is stored into the columns of the "XMLSCHEMA" typed tables. Wherein, the "XMLTYPE" tables are deemed to be "a container for XML schema namespaces" as claimed by applicant, since it contained the typed "http:..." objects. And the created "XMLSCHEMA" objects are deemed to be typed by the "create type" command.

Thus, based on the discussion above, Murthy clearly disclosed the claimed features.

Moreover, the examiner points out that since applicant fails to clearly distinguish the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. The examiner concludes that the prior art read on the claimed features.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Dingman et al. (U.S. Patent No. 6,820,135) which disclosed a Modeless event-driven data transformation that iterates through one or more data sources to transform data received from the data sources and stores the output to one or more data targets.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y. Chen whose telephone number is 571-272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2161

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Y Chen
Examiner
Art Unit 2161

Oct. 12, 2007

A handwritten signature in cursive script that reads "Susan Chen".